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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/924,730	08/08/2001	Paul A. Kline	CRNT-0011	3963

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EXAMINER

PREVIL, DANIEL

ART UNIT

PAPER NUMBER

2632

DATE MAILED: 05/23/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

09/924,730

**Applicant(s)**

KLINE, PAUL A.

**Examiner**

Daniel Previl

**Art Unit**

2632

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 04 March 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-45 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-45 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

### Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 10. 6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

This action is responsive to communication filed on March 4, 2003.

#### ***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 35-45 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 35 recites the limitation "the outer conductor" in line 5, there is insufficient antecedent basis for this limitation in the claim.

Claims 36- 45 are rejected for the same reason since they depend from a rejected claim.

#### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-2, 4, are rejected under 35 U.S.C. 103(a) as being unpatentable over Warnagiris (US 4,697,166) in view of Yoshikazu (US 5,568,185).

Regarding claim 1, Warnagiris discloses communicating the data signal with the transceiver via a power line ( signals are received from the line and filtered by the same resonant circuit that is used to transmit signals onto the line) (col. 3, lines 29-36).

Warnagiris discloses the limitation above but fails to explicitly disclose inducing an alternating current (AC) voltage from the power signal carried by the power line; powering a transceiver device with the induced AC voltage.

However, Yoshikazu discloses the step of inducing an alternating current (AC) voltage from the power signal carried by the power line (transformer/rectifier power supply circuit 34 receives alternating current power via a line cord) (col. 5, lines 5-8); powering a transceiver device with the induced AC voltage (transceiver receives its power from a transformer which receives alternating current via a line cord) (col. 5, lines 5-8).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Yoshikazu in Warnagiris . Doing so would deliver accurately clearer signals and permit the system to be less expensive, more convenient and quicker for inter home or building use.

Regarding claims 2, 4, Yoshikazu discloses the step of transmitting the data signal to an end user communication device via the transceiver device (transceiver 10 is connected to the telephone system by a telephone wire 32) (col. 4, lines 63-67; col. 5, lines 1-2). Same motivation as claim 1.

1. Claims 3, 5-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Warnagiris (US 4,697,166) in view of Yoshikazu (US 5,568,185) and further in view of Abraham (US 6,014,386).

Regarding claims 3, 5, Warnagiris discloses all the limitations in claim 1 but fails to disclose a fiber optic link.

However, Abraham discloses a fiber optic (col. 3, lines 14-16).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Abraham in Warnagiris and Yoshikazu. Doing so would deliver accurately clearer signals and fiber optic is less expensive, more convenient and quicker for inter home or building use.

Regarding claims 6, 7, Warnagiris discloses the step of filtering the induced AC voltage (fig. 3).

3. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Warnagiris (US 4,697,166) in view of Yoshikazu (US 5,568,185).

Regarding claim 1, Warnagiris discloses communicating the data signal with the transceiver via a power line ( signals are received from the line and filtered by the same resonant circuit that is used to transmit signals onto the line) (col. 3, lines 29-36).

Warnagiris discloses the limitation above but fails to explicitly disclose a transformer device having a core disposed in relation to the power line for inducing an alternating current (AC) voltage from the power signal carried by the power line; powering a transceiver device with the induced AC voltage.

However, Yoshikazu discloses the step of a transformer 34 having a core (fig. 2) disposed in relation to the power line cord inducing an alternating current (AC) voltage from the power signal carried by the power line (transformer/rectifier power supply circuit 34 receives alternating current power via a line cord) (col. 5, lines 5-8); powering a transceiver device with the induced AC voltage (transceiver receives its power from a transformer which receives alternating current via a line cord) (col. 5, lines 5-8).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Yoshikazu in Warnagiris . Doing so would deliver accurately clearer signals and permit the system to be less expensive, more convenient and quicker for inter home or building use.

2. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Warnagiris (US 4,697,166) in view of Yoshikazu (US 5,568,185) and further in view of Abraham (US 6,014,386).

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Regarding claim 9, the above combination discloses all the limitations in claim 8 but fails to explicitly disclose a ferrite member disposed in proximity to the power line for increasing of a section of the power line; and enclosure for housing the ferrite member, the transformer device, and the transceiver device.

However, Abraham discloses a ferrite member disposed in proximity to the power line for increasing of a section of the power line (the transceiver input impedance is optimally match the line impedance about 25% of the source power through the power line) (col. 6, lines 18-45); a ferrite core, transformer device and transceiver device (col. 5, lines 47-55; col. 6, lines 18-39).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Abraham in Warnagiris and Yoshikazu. Doing so would deliver accurately clearer signals and permit the system to be less expensive, more convenient and quicker for inter home or building use.

3. Claims 10-17, are rejected under 35 U.S.C. 103(a) as being unpatentable over Warnagiris and Yoshikazu in view of Abraham and further in view of CERN (US 6,452,482).

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Regarding claims 10, 14, the above combination discloses all the limitations in claim 8 but fails to explicitly disclose the power line includes a second conductor external to the insulator, wherein the transceiver communicates the data signal through the second conductor.

However, CERN discloses a cable 100 includes a second conductor 105 external to the insulator 120 (conductors wrapped around an outer layer of the cable) (fig. 1; col. 4, lines 60-65), wherein the transceiver communicates the data signal through the second conductor (a second winding 235 of coupler 220 is coupled to a port 235 through which data is transmitted and received) (col. 6, lines 14-19).

Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of CERN in Warnagiris, Yoshikazu and Abraham. Doing so would deliver accurately clearer signals and permit the system to be less expensive, more convenient and quicker for inter home or building use.

Regarding claim 11, the above combination discloses all the limitations in claim 10 and Abraham further discloses a ground potential (col. 18, lines 1-15).

Regarding claim 12, the above combination discloses all the limitations in claim 10 and Abraham further discloses a current transformer (col. 17, lines 52-64).

Regarding claim 13, the above combination discloses all the limitations in claim 10 and Abraham further discloses fiber optic (col. 3, lines 13-18).



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Regarding claim 15, the above combination discloses all the limitations in claim 10 Abraham further discloses AC to DC power (col. 16, lines 28-31).

Regarding claims 16-17, Warnagiris discloses an AC filter (col. 4, lines 38-40).

4. Claims 18-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over CERN (US 6,452,482) in view of Yoshikazu (US 5,568,185).

Regarding claims 18, 24, CERN discloses the step of removing a portion of the outer insulator of the coaxial power cable (reduce the size of the legs in standard core shapes, winding 630 is wound around a portion of the cores) (fig. 6; col. 9, lines 52-58); coupling communication device to the remove portion of the coaxial power cable where the outer insulator is removed (modem coupled to the cable) (fig. 6).

CERN discloses the limitations above but fails to explicitly disclose inducing voltage from the power signal carried by the center conductor of the coaxial power cable.

However, Yoshikazu discloses the step of inducing voltage from the power signal carried by the center conductor of the coaxial power cable (transformer/rectifier receives alternating current) (fig. 3-4; col. 5, lines 5-8; col. 6, lines 51-57)

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Yoshikazu in CERN. Doing so would increase the noise protection filter and would allow an electrical current to pass without notable attenuation.

Regarding claim 19, CERN discloses an outer conductor at a predetermined distance from the communication device (fig. 1).

Regarding claims 20, 21, CERN discloses the step of selecting the predetermined length to provide an inductance value (fig. 2).

Regarding claim 22, CERN discloses a gap in the outer conductor wherein the communication device is communicatively coupled to the outer conductor on both sides of the gap (fig. 1).

Regarding claim 23, the above combination discloses all the limitations in claim 18 and Yoshikazu further discloses the induced voltage is supplied to the communication device via a power supply (col. 5, lines 5-8).

5. Claims 25-45 are rejected under 35 U.S.C. 103(a) as being unpatentable over CERN. in view of Yoshikazu.

Regarding claims 25, 35, 36, CERN disclosing the step of inducing a second voltage from the center conductor 245 (fig. 2; col. 5, lines 60-67; col. 6, lines 1-50 ); communicating data signal from the outer conductor (data carrying trough conductor 202) (fig. 2; col. 6, lines 21-50).

CERN discloses all the limitations above but fails to explicitly disclose the step of providing power to the transceiver.

However, Yoshikazu discloses the step of providing power to the transceiver (col. 5, lines 5-8).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Yoshikazu in CERN. Doing so would allow the power line to communicate with external services with a clearer signal and less expensive, more convenient and quicker for the customers.

Regarding claims 26-28, 38, 39-40, CERN discloses an outer conductor is supplied via a point of presence (fig. 1).

Regarding claims 29-30, 41-42, the above combination discloses all the limitations in claim 25 and Yoshikazu further discloses transceiver 10 receive the data signal from and provide the data signal to customer premise and telephone (fig. 2). Same motivation as claim 25.

Regarding claim 31, CERN discloses the transceiver (transmit and receive) is conductively coupled to the outer conductor to facilitate data communication therethrough ((fig. 1; col. 7, lines 22-26; col. 9, lines 1-7).

Regarding claims 32, 37, the above combination discloses all the limitations in claim 25 and Yoshikazu further discloses a direct current voltage (col. 5, lines 1-4).

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Regarding claims 33, 44, although, the above limitation discloses all the limitations above but fails to specify a range of 120 volts to 15 kilovolts. Since, Yoshikazu discloses a direct current (col. 5, lines 1-4). It is obvious for any skill artisan at the time the invention was made to use any voltage range to transmit accurately signals at both ends of the line.

Regarding claims 34, 45, CERN discloses a ferrite core (col. 13, lines 58-61).

Regarding claim 37, the above combination discloses all the limitations in claim 25 and Yoshikazu further discloses a transceiver includes a power supply to a direct current voltage (col. 5, lines 1-8).

Regarding claim 43, CERN discloses a modem coupled to outer conductor 105 to facilitate data communication therethrough (fig. 1).

### ***Response to Arguments***

6. Applicant's arguments with respect to claim 1-23, 25-45 have been considered but are moot in view of the new ground(s) of rejection.

Claim 24 needs to be cancelled officially in the next response, merely mentioned it in the remark could not cancel the claim.

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7. Applicant's submission of an information disclosure statement under 37 CFR 1.97(c) with the fee set forth in 37 CFR 1.17(p) on 2/13/2003 (CERN) prompted the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 609(B)(2)(i). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

### ***Conclusion***

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Sanderson (US 6,040,759) discloses a communication system for providing broadband data services using a high-voltage cable of a power system.

Enge (US 3,605,009) disclosed a stabilized power supply.

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Mansfield, Jr. et al. discloses an highly reliable power line communications system.

Morava (US 5,616,969) discloses a power distribution system having substantially zero electromagnetic field radiation.

Merwin et al. (US 5,691,691) discloses a power line communication system using pulse transmission on the AC line.

Sutterlin et al. (US 5,148,144) discloses a data communication network providing power and message information.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel Previl whose telephone number is 703 305-1028. The examiner can normally be reached on Monday-Thursday. The examiner can also be reached on alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel WU can be reached on 308-6730. The fax phone numbers for the organization where this application or proceeding is assigned are 703 872-9314 for regular communications and 703 872-9315 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 305-4700.

Daniel Previl  
Examiner  
Art Unit 2632

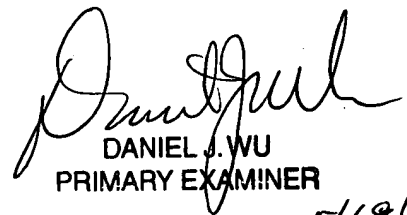
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May 19, 2003

  
DANIEL J. WU  
PRIMARY EXAMINER

5/19/03